

CLAIM AMENDMENTS

Please cancel claims 21 – 31. Please consider new claims 32 – 43.

21 – 31. (Canceled)

32. (New) A process for producing a protein by heterologous expression in a host cell wherein said host cell is selected from a group comprising Gram-positive or Gram-negative bacteria, wherein said host cell contains a gene sequence encoding said heterologous protein, wherein said host cell is cultivated at a temperature of below 25°C and wherein said host cell is genetically manipulated to contain a DNA sequence encoding a chaperonin selected from a group consisting of Cpn60 according to SEQ ID NO: 2 or SEQ ID NO: 7, a single ring mutant chaperonin Glu461Ala/Ser463Ala/Val464Ala according to SEQ ID NO: 11 or SEQ ID NO: 15 and a stabilized double ring mutant of Cpn60 according to SEQ ID NO: 2 with the mutation Lys468Thr/Ser471Gly.

33. (New) The process of claim 32, wherein the host cell is further genetically manipulated to contain a DNA sequence encoding a chaperonin Cpn10 according to SEQ ID NO: 1 or SEQ ID NO: 6.

34. (New) The process of claim 32, wherein the heterologous protein is selected from the group consisting of mammalian proteins, psychrophilic mammalian or bacterial proteins, mesophilic bacterial, fungal or yeast proteins, and mutant or fusion variants thereof.

35. (New) The process of claim 32, wherein the heterologous protein has enzymatic activity or hormonal activity in its native conformation.

36. (New) The process of claim 32, wherein the cultivation temperature is 4 to 15°C.

37. (New) A process for changing a conformation of a denatured protein into a native conformation, comprising:

contacting the denatured protein with a chaperonin in the presence of at least one nucleotide, wherein the chaperonin is selected from the group consisting of Cpn60 according to SEQ ID NO: 2 or SEQ ID NO: 7, the single ring mutant chaperonin Glu461/Ala/Ser463Ala/Val464Ala according to SEQ ID NO: 11 or SEQ ID NO: 15 and a stabilized double ring mutant of Cpn60 according to SEQ ID NO: 2 with the mutation Lys468Thr/Ser471Gly.

38. (New) The process of claim 37, wherein the chaperonin further contains the chaperonin Cpn10 according to SEQ ID NO: 1 or SEQ ID NO: 6.

39. (New) The process of claim 37, wherein the process is performed extracellularly.

40. (New) The process of claim 33, wherein the heterologous protein is selected from the group consisting of mammalian proteins, psychrophilic mammalian or bacterial proteins, mesophilic bacterial, fungal or yeast proteins, and mutant or fusion variants thereof.

41. (New) The process of claim 33, wherein the heterologous protein has enzymatic activity or hormonal activity in its native conformation.

42. (New) The process of claim 33, wherein the cultivation temperature is 4 to 15°C.

43. (New) The process of claim 38, wherein the process is performed extracellularly.